AMENDMENTS TO THE SPECIFICATION

Please amend page 3, second paragraph as follows:

--In this context, QCTCs have been proposed to increase performance in a soft combining-using system. For details of the QCTCs, see Korea Patent Application No. P2000-62151 filed by the present applicant, and filed in the U.S. Patent and Trademark Office on October 17, 2001 and assigned Serial No. 09/981,934.--

Please amend page 14, second full paragraph as follows:

--Referring to FIG. 6, the remaining unselected symbols from the previous puncturing matrices are all selected in step 601. The number of the selected symbols is defined as Ns2. In step 603, a new Ns is defined by (Ns–Ns2). Since symbols at all positions are selected from the puncturing matrices in the process of the operations shown in FIGs. 4, 5 and 6, the new Ns is the number of symbols to be repeatedly selected. In step 605, it is determined whether the new Ns is greater than 0. If the new Ns is 0, the procedure ends. If it is greater than 0, in step 607 as many symbols as the new Ns are selected repeatedly from the information symbols. In other words, the selected symbols are transmitted repeatedly.--

Please amend page 30, second full paragraph as follows:

--In step 805, concatenation or grouping rules are set to generate sub-codes for each QCTC in each group using the sub-codes C_{pj} (j=0, 1, 2, . . ., S_p–1) of each primitive code C_p. The rules may include the number of sub-codes to be concatenated or grouped in each primitive code. In other words, in step 807 an intended sub-code C_{ij} with a code rate R_i is generated by concatenating or grouping sub-codes of the primitive code C_p. A sub-code grouping table can be made preliminarily by considering all possible sub-code grouping. In this case, it is preferable to

group sub-codes sequentially in the primitive code C_p.--

Please amend page 30, last paragraph:

--Once a code rate (or a QCTC or a sub-code) is given, in step 807 a sub-code of QCTC with the code rate is generated by concatenating sub-codes of a corresponding primitive code C_p.--

Please amend page 39, last paragraph, continuing onto page 40 as follows:

--FIG. 11 is a flowchart illustrating sub-code transmission using one-dimensional adaptive QCTCs according to the second embodiment of the present invention. Referring to FIG. 11, upon generating of a new encoder block in step 1100, the controller 1303 sets all variables (j_current, j_pre, g_current and g_pre to initial values in step 1101. In step 1103, the controller 1303 selects a QCTC group including a QCTC with a given code rate and determines a grouping number g, that is, the number of sub-codes to be grouped in a primitive code C_p. Here, the code rate is determined according to a channel condition and the data rate of input data in the transmitter. The grouping number g is a variable by which a QCTC included in the group is identified. After determining the group and the grouping number g_current, the controller 1303 reads a variable j_pre stored for the QCTC C_i with the code rate and sets a variable j_current to the read value in step 1105. The j_current indicates the sequence number of a sub-code in a QCTC. Then, the controller 1303 selects the jth_current sub-code of the QCTC corresponding to the variable g_current in the group in step 1107 and transmits the coded symbol corresponding to the selected sub-code in step 1109. For the next transmission, in step 1111 the variables g_current and j_current are stored as variables g_pre and j_pre. Sub-codes corresponding to j_current(=0), that is, the first sub-codes of the QCTCs are expressed as

$$\forall g \; C_{p0}^{g}, \; g = 1, \ldots, \qquad \ldots\ldots (15)$$

Then, a sub-code corresponding to g_current(or g) is selected among the first sub-codes.--

Please amend page 40, last paragraph:

--After transmitting the sub-code, the controller 1303 determines whether another sub-code is requested, that is, whether a retransmission request has been received from a receiver in step 1111. Upon request from another sub-code, the controller 1303 transmits a sub-code with a given rate in step 1113. Otherwise, the controller 1303 returns to step 1100 to receive a new coded block.--